

# CIP System

## What Is CIP System?

- **CIP System:**
- **Cleaning in Place or On-line Cleaning System** is known for cleaning of product contact surface of vessel, heat exchanger, piping equipment without dismantling from line.
- CIP started as a manual practice involving a balance tank, centrifugal pump, and connection to the system being cleaned.
- The benefits to industries by using CIP is that the cleaning is faster, less labor-intensive and more repeatable, and poses less of a chemical exposure risk.
- CIP cleaning, referred as Clean-In-Place System, is a procedure of cleaning interior product contact surfaces such as process pipes, vessels and equipment, without dismantling.
- In contrast, Cleaning-Out-of-Place (COP) is a method used when parts cannot be cleaned-in-place and must be dismantling from the process.
- Whether CIP cleaning or cleaning-out-of-place, to achieve a sanitary clean, the basic cleaning principles of
- **TACT—Time, Action, Chemical and Temperature**
- Must be understood.





## Why Platex®India for CIP System??

- PLATEX® has designed Trolley based mobile cleaning equipment and customized to sizes from 100 to 1000LTR.
- PLATEX® CIP system is automated in a way where in built-in hater, pressure transmitters, Flow meter, Temperature sensors which makes sure 100% cleaning & efficient working.
- PLATEX® CIP units can be used for many process equipment like Heat Exchangers, Vessels, Reactors etc. The time-taking work of opening heat exchangers can be avoided.
- Benefit to industries are cleaning is faster, less labor-intensive and more repeatable also less chemical exposure risk.
- Platex® supplies a wide range of cleaning agents suitable for removing most of these troublesome deposits and restoring performance to optimal levels.

### Types of CIP Systems & Models

#### Design Principle of CIP

#### Principle of operation

#### Operating Principle of CIP System



## Types of CIP Systems

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- Manual
- Semi-Automatic
- Automatic

## Models:

1. PLATENANO : 100LTR
2. PLATEMICRO : 200LTR
3. PLATEMINI : 400LTR
4. PLATENORM : 600LTR
5. PLATELARG : 800LTR

## Old vs New Practice Comparison

**Manual Cleaning of Heat Exchanger is outdated technology...  
USE CIP Instead and save on DOWN TIME, improve Productivity.**

1. **OPENING** of Heat Exchanger NOT Required
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  - No Gasket Damage
  - No Spares Required
  - No Leakage Problem
  - No Manpower Require
  - Easy to Fit
2. Trolley Mounted System (Mobile)
3. Multiple Heat Exchangers can be cleaned
4. Less operating cost
5. Less cleaning times

6. Semi-Automatic and Fully Automatic

7. Manual System requires only One Operator

### **Return on investment?**

Determining the right investment in an appropriate CIP system also greatly depends upon budget.

More tanks designed into a system means more upfront capital cost, but it also increases production capacity.

ROI on a CIP system often takes just one or two years.

Some of our customers have production hours that run into tens of thousands of rupees.

Saving them 15 minutes of cleaning time each week can create tremendous positive results.

### **Technical Information**

**Process Liquid:** Chemical Cleaning Agent

**Power Supply:** 3 Phase / 380-415VAC / 50Hz

**Application:** Cleaning in place of Heat Exchangers

#### **Tank & Trolleys:**

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- Material of construction: AISI 304
- Tank Capacity : 100, 200, 400, 600, 800,1000 LTRS
- Pump
- Type: Centrifugal
- Capacity: 6m3/hr to 50m3/hr
- Motor KW 2 to 5.5
- Wetted parts material SS316

#### **Hoses:**

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- Hose Type Chemical hoses Inner layer black UPE with outer Green smooth layer EPDM
- Hose lengths/QTY: 4 meters/2Pcs
- End connection: SMS Union

#### **Valves:**

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- Material AISI 304
- Type Butterfly Valves Manual Operation

#### **Heater:**

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- Type: Immersion heater kW 12 kW Each

- Number of heater's one / Two

**Control Panel:** Pump & Heater Control Panel

### **Cleaning Solution for CIP System**

De-scaling solutions plays most important role in cleaning any type of process equipment, Platex®India being an expert in servicing of process equipment's designed chemicals which are highly efficient cleaning agents, also takes care of the material of construction of the equipment.

To identify the exact cleaning agent suitable for process equipment, Platex®India has developed a test kit which can be used directly by user to identify suitable chemical. The test kit contains following chemicals.